

LSI DOCKET NO. 03-0576

CLAIMS:

What is claimed is:

1. A method for performing data mirroring, the method comprising:
5 initiating a data mirroring operation with a group of target devices connected to a bus;
performing arbitration and selection with attention to a target leader within the group of
target devices;
sending a target leader identification message identifying the target leader;
sending a data block to the target leader;
10 sending a target selection message identifying a participating target within the group of
target devices; and
sending a data block to the participating target without creating an initiator/target nexus
with the participating target.
- 15 2. The method of claim 1, wherein the target leader holds the bus for the data mirroring
operation.
3. The method of claim 2, wherein holding the bus includes asserting a busy line on the bus.
- 20 4. The method of claim 1, further comprising:
sending a bus release message instructing the target leader to release the bus.
5. The method of claim 1, wherein the participating target drives at least one phase line
during a data phase.
- 25 6. The method of claim 1, wherein the target leader identification message and the target
selection message include a vendor command that indicates that an initiator of the message is
notifying for silent mirroring mode capability.

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7. The method of claim 1, wherein the target leader identification message and the target selection message include a silent mirroring group identification and a target device identification.
- 5 8. The method of claim 1, wherein the target selection message includes an indicator that the participating target is the last target device in the data mirroring operation.
9. The method of claim 1, wherein each target device in the group of target devices returns a status.
- 10 10. The method of claim 9, further comprising:
identifying at least one unsuccessful data block; and
re-transferring the at least one unsuccessful data block using a data mirroring operation.
- 15 11. An apparatus for performing data mirroring, the apparatus comprising:
a bus;
a host connected to the bus; and
a group of target devices connected to the bus, wherein the group of target devices includes a plurality of participating targets including a target leader,
20 wherein the host initiates a data mirroring operation with the group of target devices, performs arbitration and selection with attention to the target leader, sends a target leader identification message identifying the target leader, sends a data block to the target leader, sends a target selection message identifying a selected participating target within the group of target devices, and sends a data block to the selected participating target without creating an
25 initiator/target nexus with the selected participating target.
12. The apparatus of claim 11, wherein the target leader holds the bus for the data mirroring operation.

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13. The apparatus of claim 12, wherein holding the bus includes asserting a busy line on the bus.

14. The apparatus of claim 11, wherein the host sends a bus release message instructing the target leader to release the bus.

15. The apparatus of claim 11, wherein the selected participating target drives at least one phase line of the bus during a data phase.

16. The apparatus of claim 11, wherein the target leader identification message and the target selection message include a vendor command that indicates that an initiator of the message is notifying for silent mirroring mode capability.

17. The apparatus of claim 11, wherein the target leader identification message and the target selection message include a silent mirroring group identification and a target device identification.

18. The apparatus of claim 11, wherein the target selection message includes an indicator that the selected participating target is the last target device in the data mirroring operation.

19. The apparatus of claim 11, wherein each target device in the group of target devices returns a status.

20. A computer program product, in a computer readable medium, for performing data mirroring, the computer program product comprising:

instructions for initiating a data mirroring operation with a group of target devices connected to a bus;

instructions for performing arbitration and selection with attention to a target leader within the group of target devices;

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instructions for sending a target leader identification message identifying the target leader;

instructions for sending a data block to the target leader;

5 instructions for sending a target selection message identifying a participating target within the group of target devices; and

instructions for sending a data block to the participating target without creating an initiator/target nexus with the participating target.